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ABSTRACT

This second annual report for the Wake County (North Carolina) Public School System examined students' achievement indicators among groups that vary in gender, race, and economic status. The graphic format displays the extent of some of the gaps in academic achievement among the groups examined that existed in the 1993-94 school year, and compares 1993-94 patterns to those seen in 1992-93 data. Information presented includes 1990 census data on Wake County children living in poverty; low income group End-of-Grade (EOG) test performance; 1994 EOG tests; 1994 writing tests and high school failures; low achievement in high schools; special programs; several measures of academic success on the 1994 EOG reading and writing tests, for students enrolled in chemistry or physics in 1993-94, and for students identified as academically gifted; and changes in dropout rates, course failures, and scores below 2.5 on fourth grade writing, comparing 1992-1993 to 1993-1994. Major findings of the report indicate that: (1) white females were the most academically successful group, and black males were the least successful; (2) black students were more likely to come from low-income single-parent families; (3) more than half of black students scored in below grade level achievement; (4) the dropout gap between white and black students widened in 1993-94; (5) males were more frequently identified as learning disabled than females; and (6) black males were more frequently identified as behaviorally and emotionally handicapped than other groups. (WP)

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ED 384 417

RACIAL AND GENDER GAPS IN ACADEMIC ACHIEVEMENT

AN UPDATED LOOK AT 1993-94 DATA

Department of Evaluation and Research
Wake County Public School System

April 1995

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RACIAL AND GENDER GAPS IN ACADEMIC ACHIEVEMENT

REPORT SUMMARY

Authors: Chuck Dulaney and Ginger Bethune

BACKGROUND

This is the second in a series of annual reports that analyze differences found in WCPSS student achievement indicators between groups that vary in gender, race, and economic status. This report shows that the majority of WCPSS students do very well on most measures of academic achievement. However, the performance of some groups of students lags far behind the performance of other groups. The purpose of this report is to display in graphic format the extent of some of the gaps in academic achievement that existed in the 1993-94 school year, and compare 1993-94 patterns to those seen in 1992-93 data. The report is printed on single-sided pages so that graphs can be copied as overhead transparencies for staff meetings.

MAJOR FINDINGS

As was true in the 1992-93 school year, on all but one of the twenty-five measures of student performance reviewed for this report, White females were the most successful group, and Black males were the least successful group. The gap between White and Black students did not decrease from 1992-93 to 1993-94. Findings displayed in this report indicate:

- Black students are more likely to come from low-income single-parent families.
- More than half of Black students scored in Levels I and II on the 1993 End-of-Grade tests (indicating "below grade level" achievement), compared to less than 20% of White students.
- When low achievement scores were analyzed separately for students receiving free or reduced price lunches, gaps existed between race and gender groups.
- The dropout gap between White and Black students widened in 1993-94, with the percentage of Black male high school students who dropped out rising from 10.7% to 14.7% while the White female dropout rate remained relatively stable, rising only slightly from 3.4% to 3.8%.
- The percentage of White female high school students who received at least one failing grade fell from 23% to 20%, while for Black males the percentage rose from 65% to 69%.

- The U. S. History End-of-Course test continued to be the one achievement measure on which males in all three racial categories had fewer low scores than females.

- Males were more frequently identified as learning disabled than females, and Black males were more frequently identified as Behaviorally/Emotionally Handicapped than other groups.

- White females were most frequently identified as Academically Gifted and most frequently scored in the highest level (Level IV) on reading tests.

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INTRODUCTION

Children entering WCPSS do not all have the same characteristics. They vary in noticeable attributes such as size, race and gender, and they vary in less obvious attributes such as family structure, family income, and home environment. They vary in their individual learning styles, and they vary in the kinds of prior experiences they bring with them to the classroom.

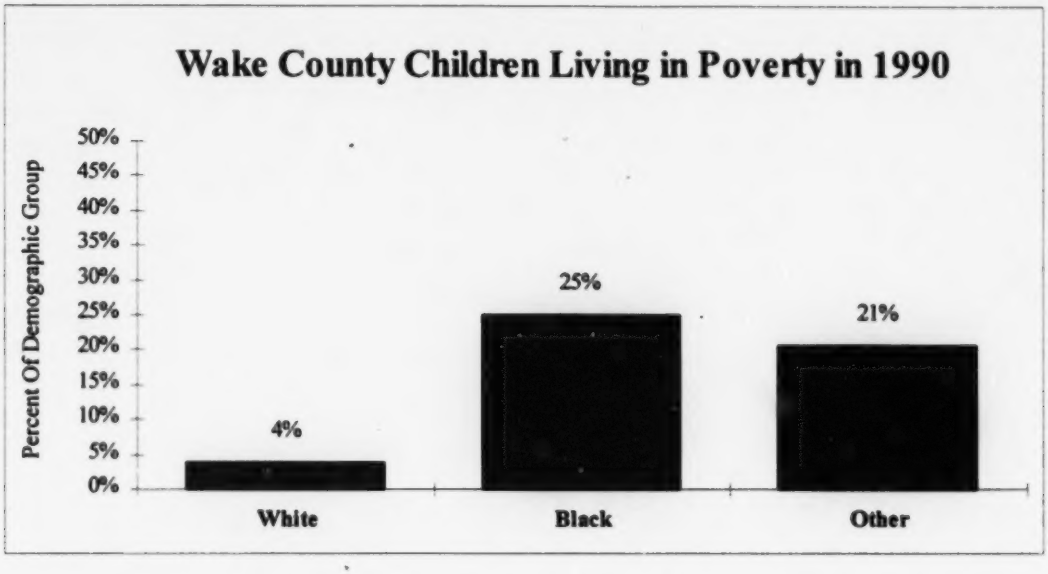
The Evaluation and Research Department prepared the graphs in this document in order to help WCPSS educators study the ways in which different groups of students are performing in our schools. While many attributes affect student performance, only a few are available on computer databases. Most of the graphs in this report show information disaggregated by race and gender.

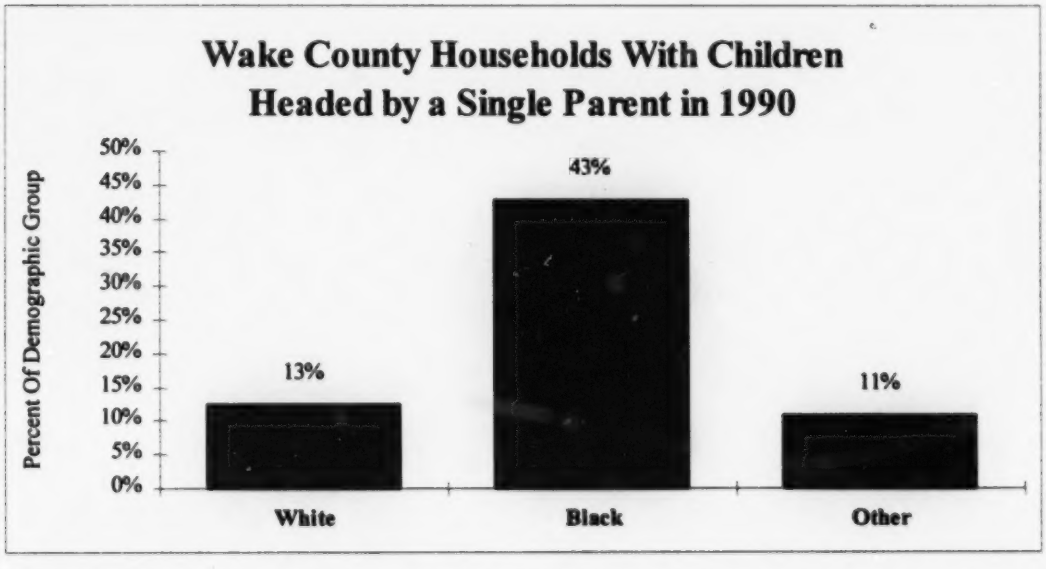
This document describes differences between groups of students. The differences present a challenge to the entire school system to find instructional strategies that will meet the needs of ***all*** students. Understanding these differences is a first step toward that goal. Some of the questions that will require serious discussion, sharing, and study include the following:

- Why does the profile of low achieving students seem to vary so little from grade level to grade level and from test to test?
- How are instructional strategies related to the patterns of student achievement?
- To what degree can different instructional strategies serve to reduce and eliminate the gaps in performance between different race and gender categories
- How do current administrative and instructional practices serve to reinforce the patterns of low achievement for certain groups?
- What areas of the curriculum might be more or less affected by differences related to race and gender?
- What schools, programs, or teachers have been more successful than the overall school system in achieving successful performance for students in all race and gender categories?
- How can successful practices best be shared between schools?
- What changes, instructional or administrative, appear to hold the most potential for eliminating achievement gaps between groups of students?

Census Data

The first two charts show that Black students are more likely to both live in poverty and live with a single parent than students in other racial groups.



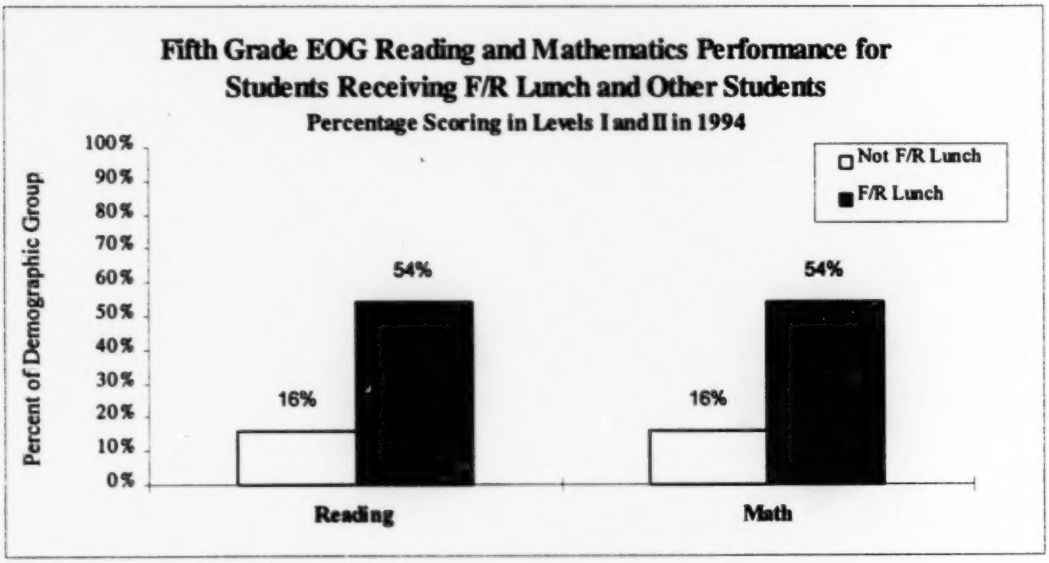


These population characteristics were taken from the 1990 Census Summary Tape File 3C. Children is defined as all persons under age 18. Poverty is defined as a 1989 income below $12,674 for a family of four.

LOW INCOME GROUP EOG TEST PERFORMANCE

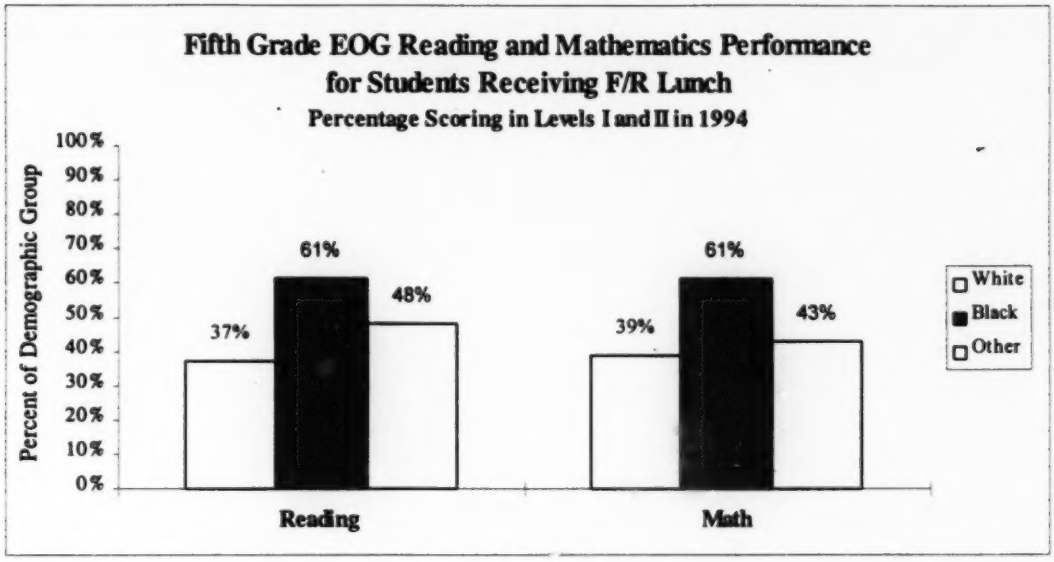
North Carolina End-of-Grade Tests generate scores that place students in four achievement levels. Level I scores indicate that "students do not have sufficient mastery of knowledge and skills to be successful at the next grade level." Level II scores indicate that "students demonstrate inconsistent mastery of knowledge and skills and are minimally prepared to be successful at the next grade level." Students scoring in Levels III and IV are considered to be at or significantly above grade level. In 1994, 24% of WCPSS students in grades 3-8 scored in Levels I and II on both reading and mathematics tests.

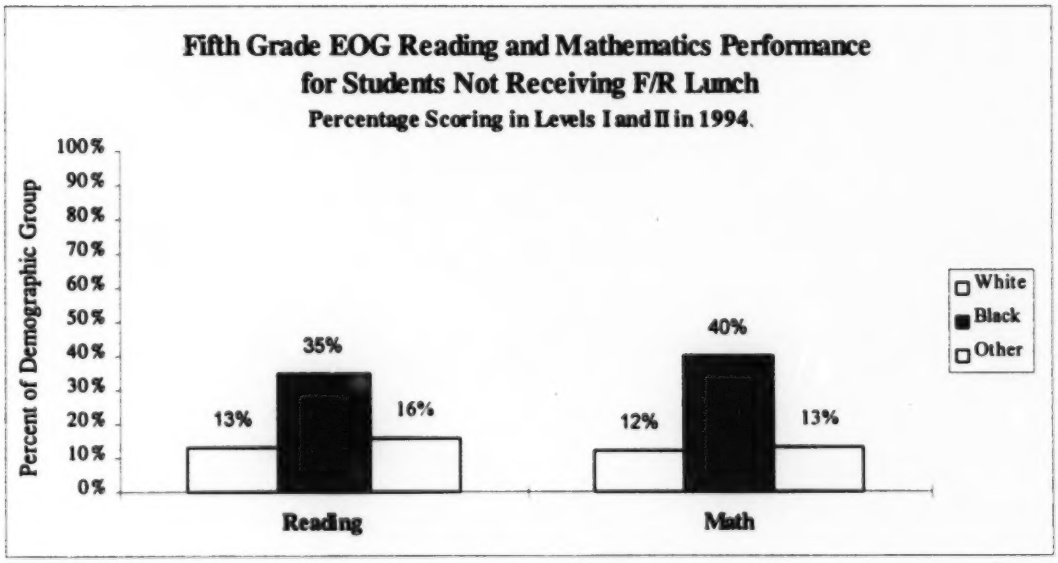
As shown below, family income is a significant factor in student achievement. A much higher percentage of students receiving free or reduced price lunches, compared to students not receiving lunch assistance, scored in the low achievement categories (Levels I and II) on Fifth Grade End-of-Grade tests in 1994. Results were identical for reading and mathematics tests. The size of the gaps between the family income groups were similar for other grade levels.



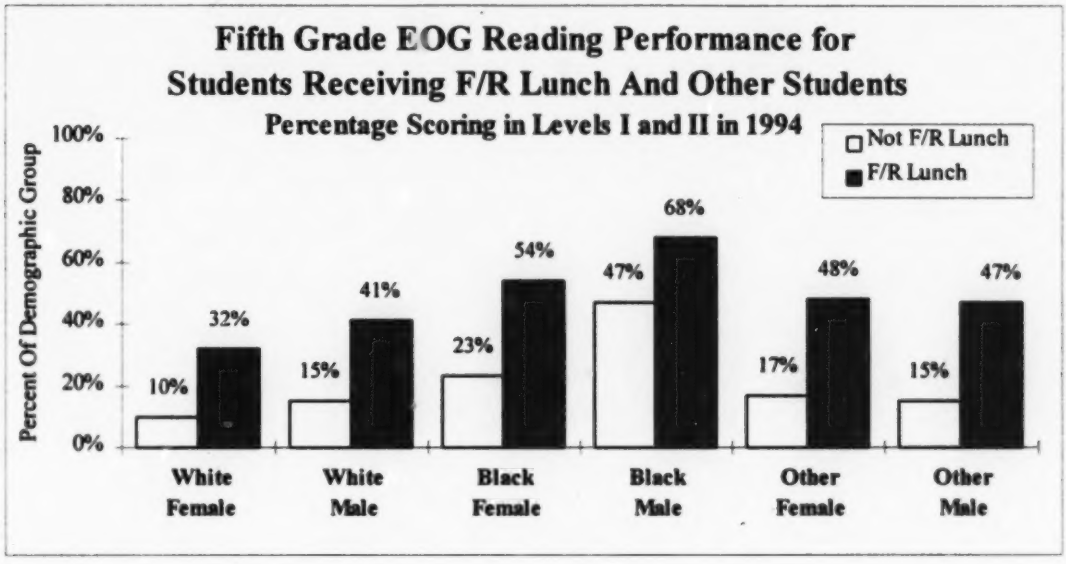
A family of four that qualified for free lunches in 1993-94 earned less than $18,655. A family of four that qualified for reduced price lunches earned less than $26,548. In 1993-94, approximately 20% of WCPSS elementary students received free lunches and 4% received reduced price lunches.

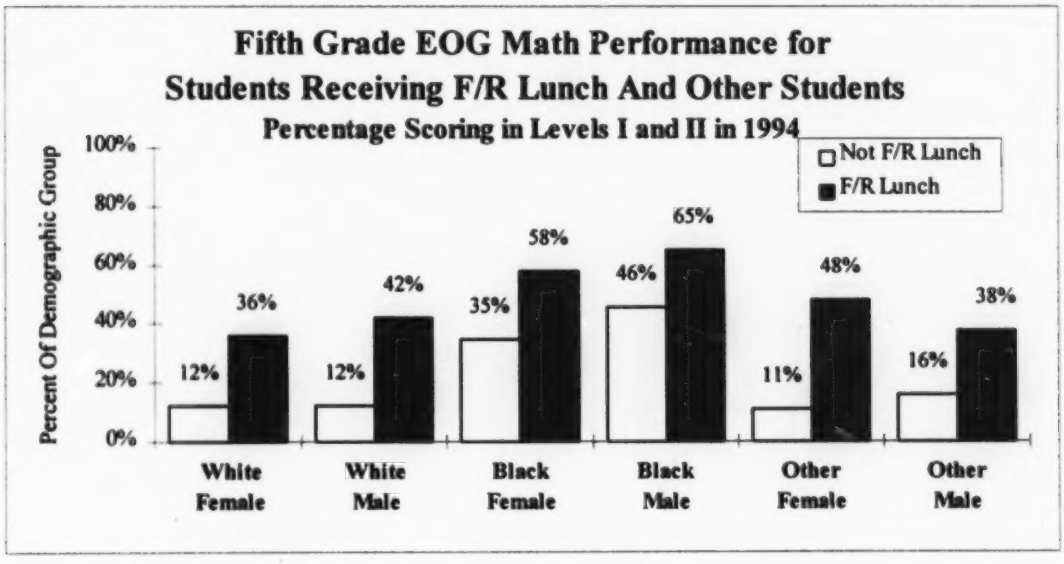
Student achievement can be examined while looking at both the race and family income of students. The following two graphs show the percentage of students, by race, that scored in Levels I and II at the end of fifth grade in 1994. One graph displays data just for students who received free or reduced price lunches. The other graph displays data for students who did not receive any lunch assistance. In both income groups, a much higher percentage of Black students are in the low achievement categories than White or Other students.





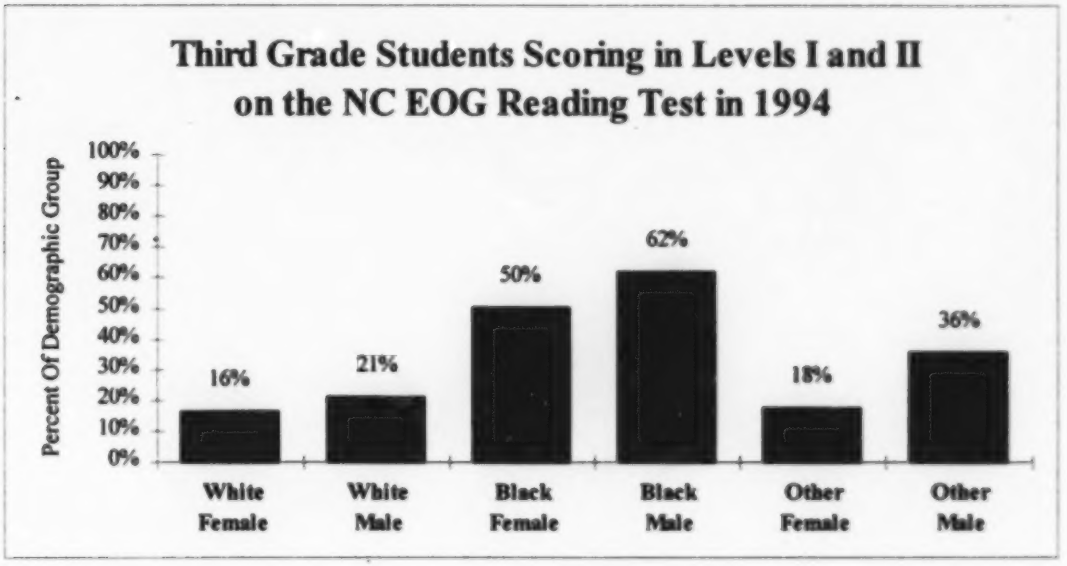
Gender and race appear to interact with family income and affect student achievement. The following two graphs show that at the end of fifth grade in 1994, White females had the lowest proportion of students in low achievement categories and Black males had the highest percentage of low achievers. While the size of the achievement gaps were affected by the income level of students' families, the pattern was the same for both income groups. Achievement gaps were somewhat greater in reading than in mathematics.

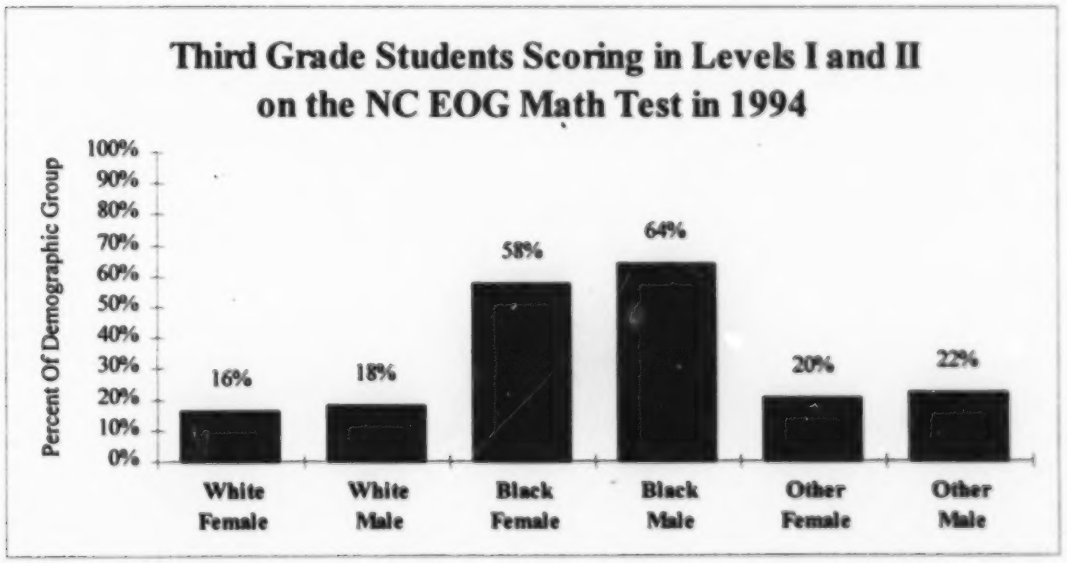




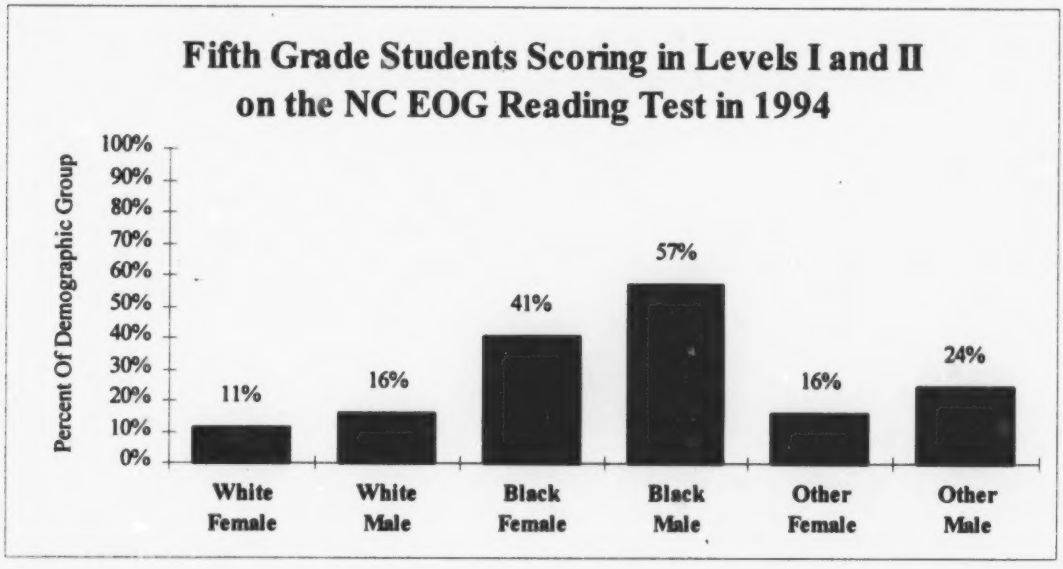
1994 END-OF-GRADE TESTS

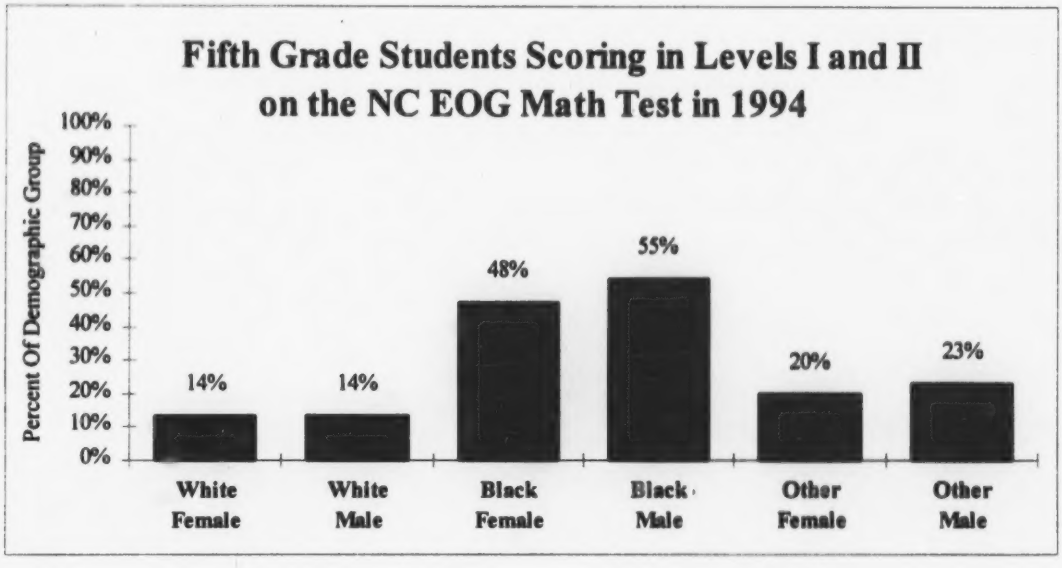
In the remainder of this report, student achievement information will be shown disaggregated by race and gender. The next set of graphs examines student performance on End-of-Grade tests. As shown below, a distinct pattern of achievement exists at the end of third grade when systemwide achievement testing occurs for the first time. The pattern is similar in both reading and mathematics.



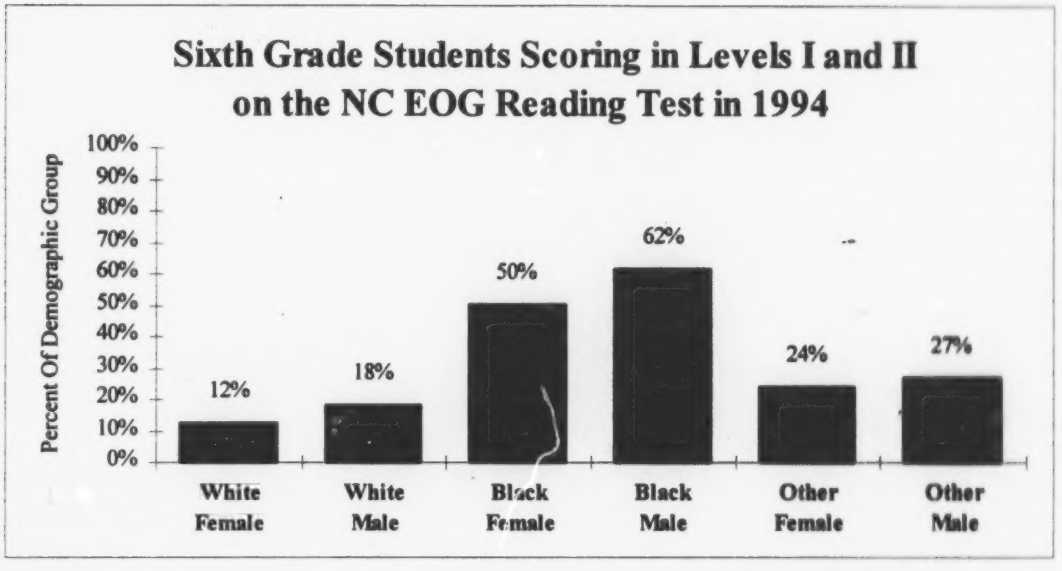


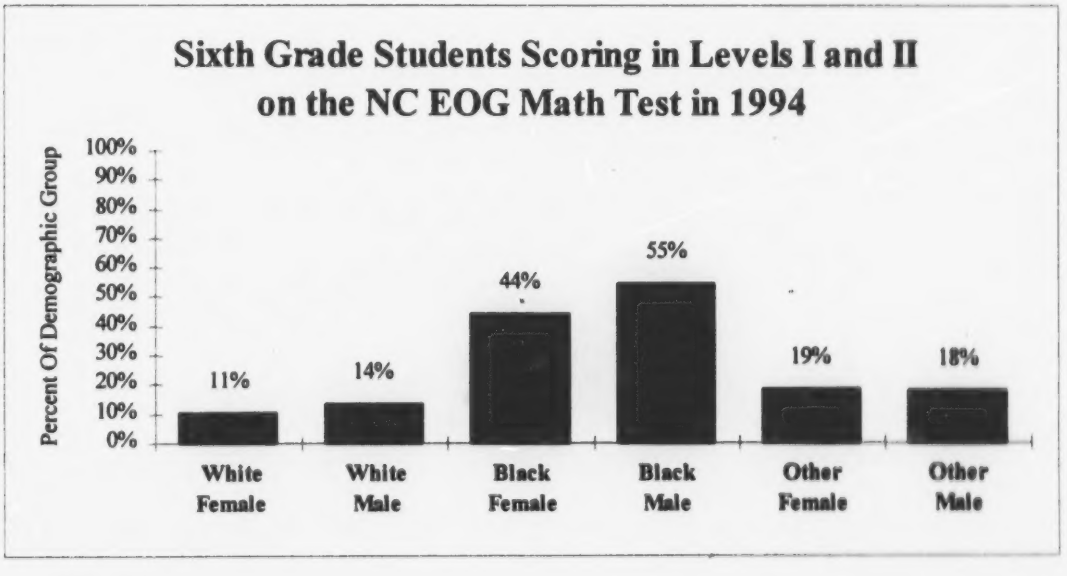
The fifth grade End-of-Grade test is the final measurement of academic achievement in elementary school in WCPSS. In 1994, the profile of low achievers at the end of fifth grade was very similar to the profile of low achievers at the end of third grade. Black males, followed by Black females, had higher percentages of students in the low achievement levels in both reading and mathematics.



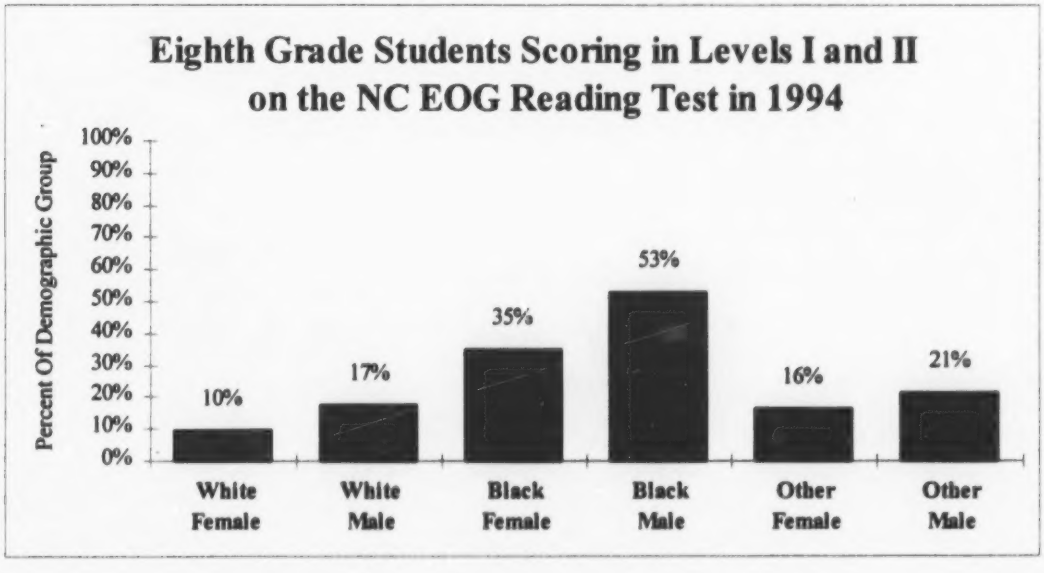


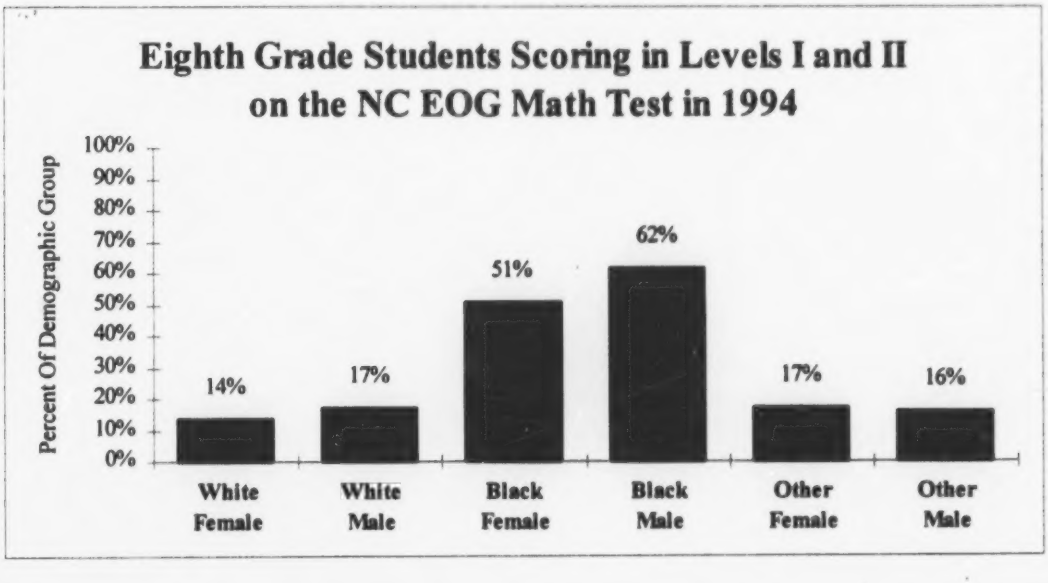
End-of-Grade tests are also given in grades six, seven and eight in middle schools. The profile of low achieving students at the end of sixth grade again showed very little change. The pattern of achievement gaps remained consistent, with a smaller proportion of females than males in all three racial groups scoring in the low achievement levels.





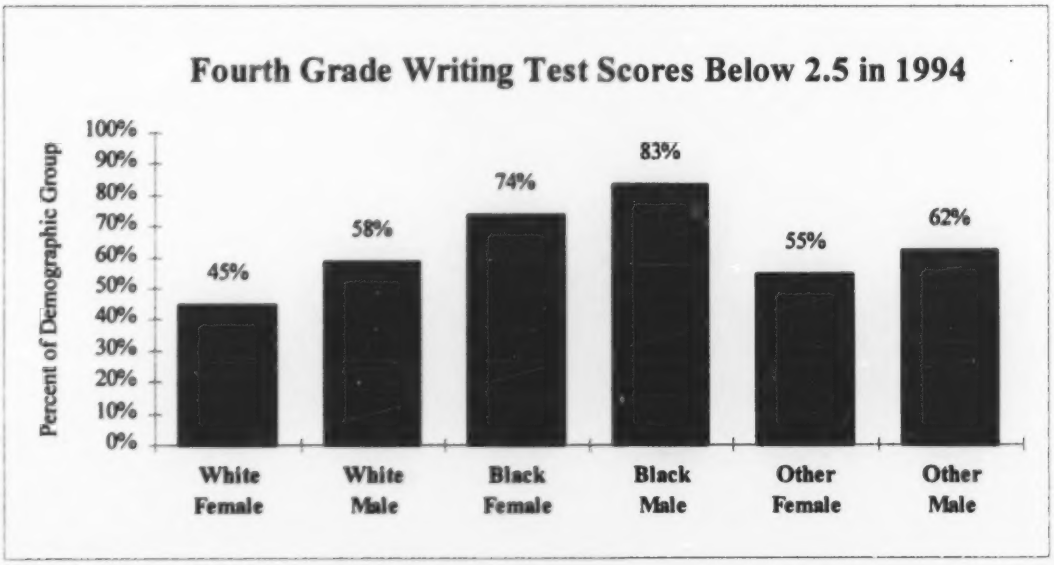
Eighth grade is the final year of End-of-Grade testing. The profile of students who scored in Levels I and II in 1994 showed very little change from grade level to grade level. The gap between males and females is larger in reading than in mathematics.

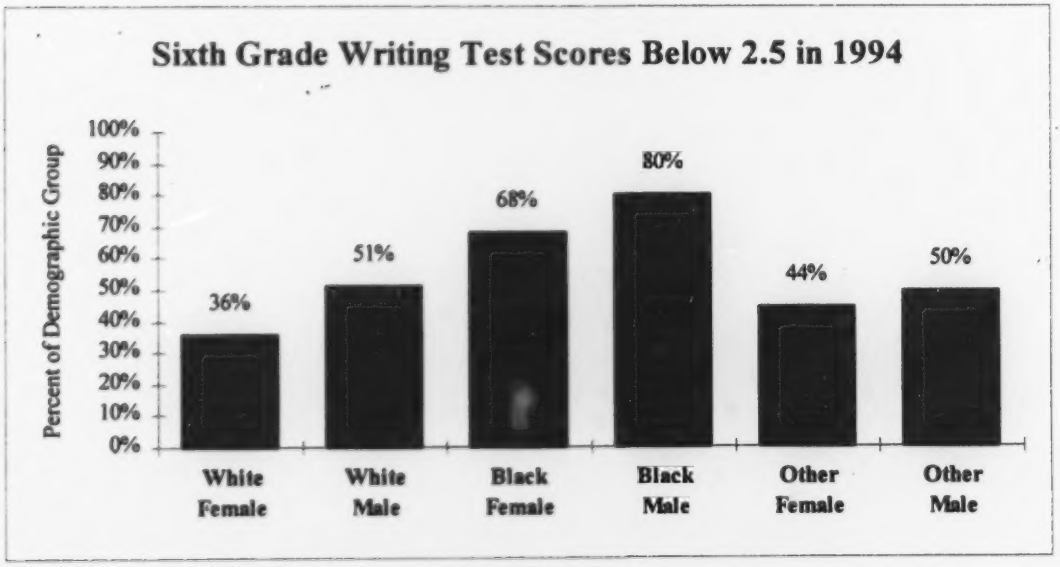




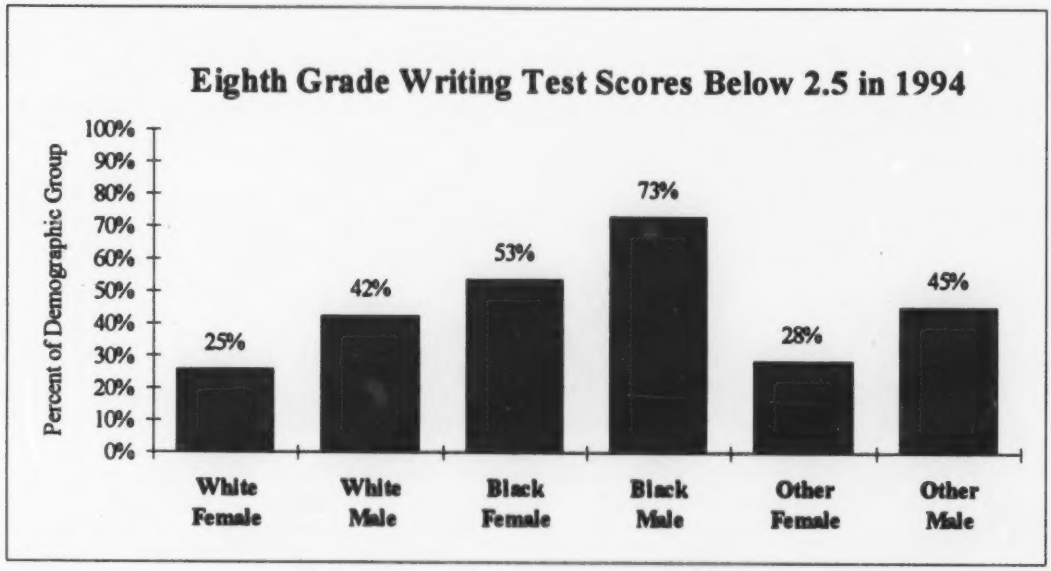
1994 WRITING TESTS AND FAILING GRADES IN H.S. ENGLISH

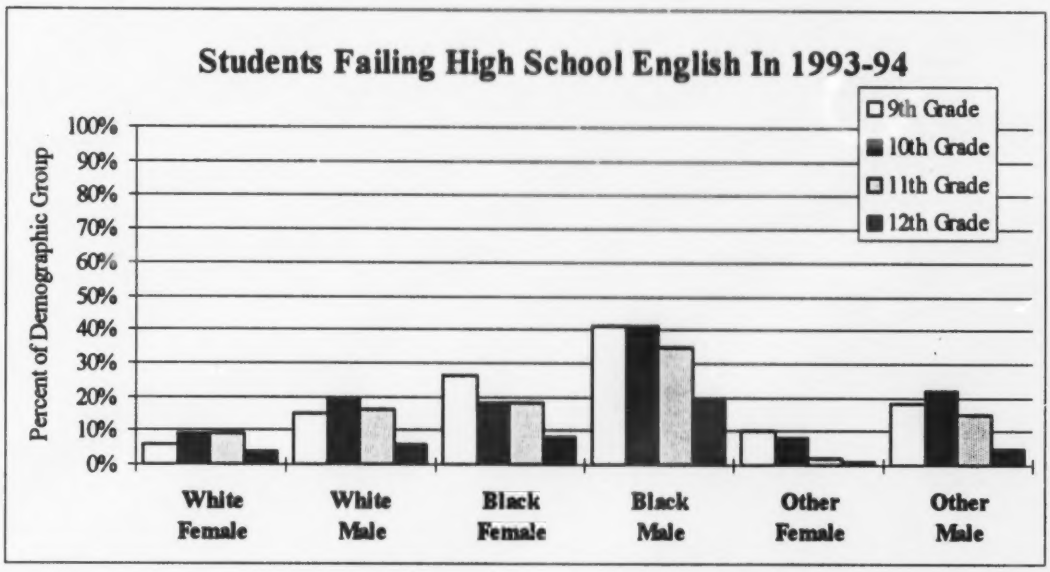
The statewide writing test is given in grades 4, 6, and 8. Each test is holistically scored by two independent readers on a four point scale, and the two scores are averaged. A score of 2.5 or better is considered evidence of acceptable writing skills. In 1994, as shown below, a majority of students in all demographic groups in fourth grade except White females scored below the acceptable level. In sixth grade, there was a similar pattern with Black males and females again showing higher percentages in the low achievement category.





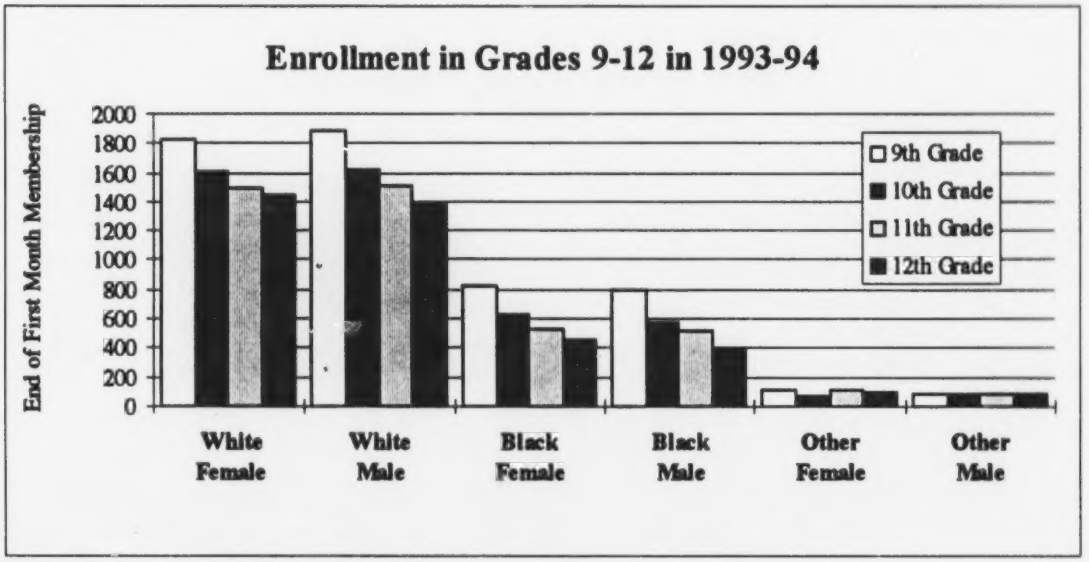
Eighth grade had fewer students scoring below 2.5, but the gaps between race and gender groupings were wider. The pattern of low scores on the writing test was similar to the pattern of students who failed high school English classes. While slightly less than half as many students failed English as scored low on the writing test, the demographic pattern was very similar, particularly in ninth and tenth grade.

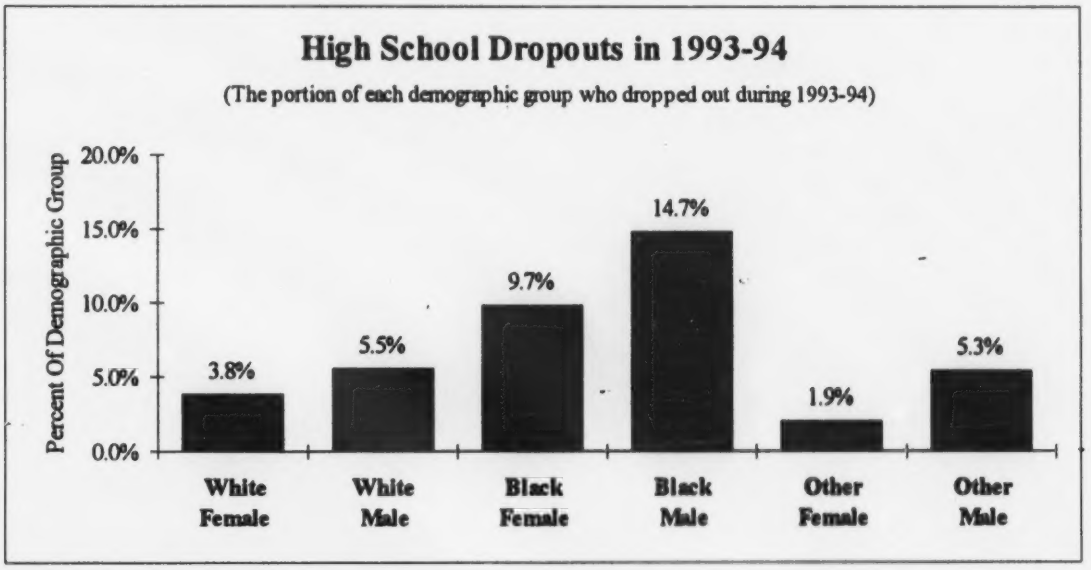




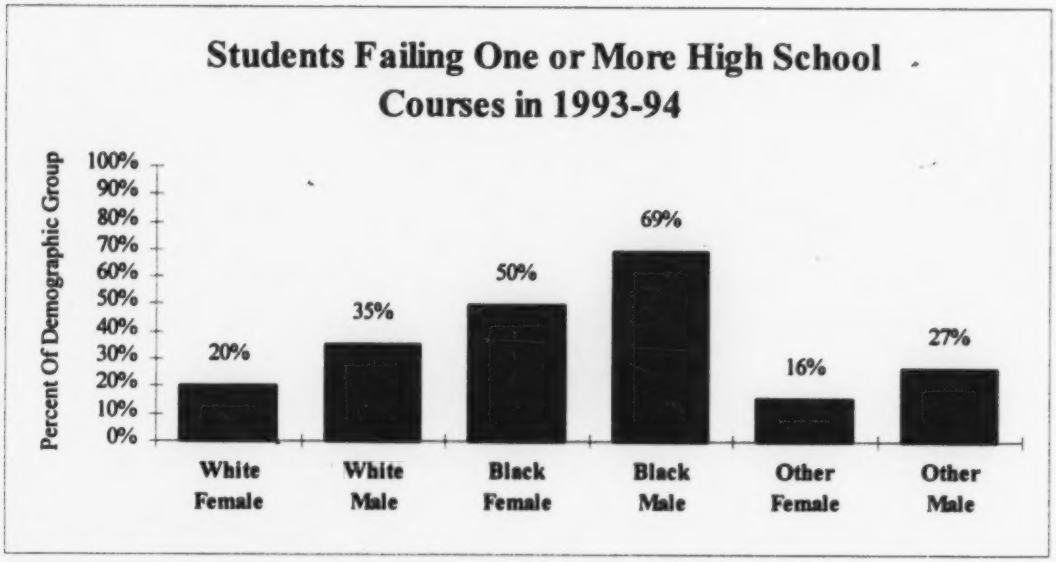
LOW ACHIEVEMENT IN HIGH SCHOOLS

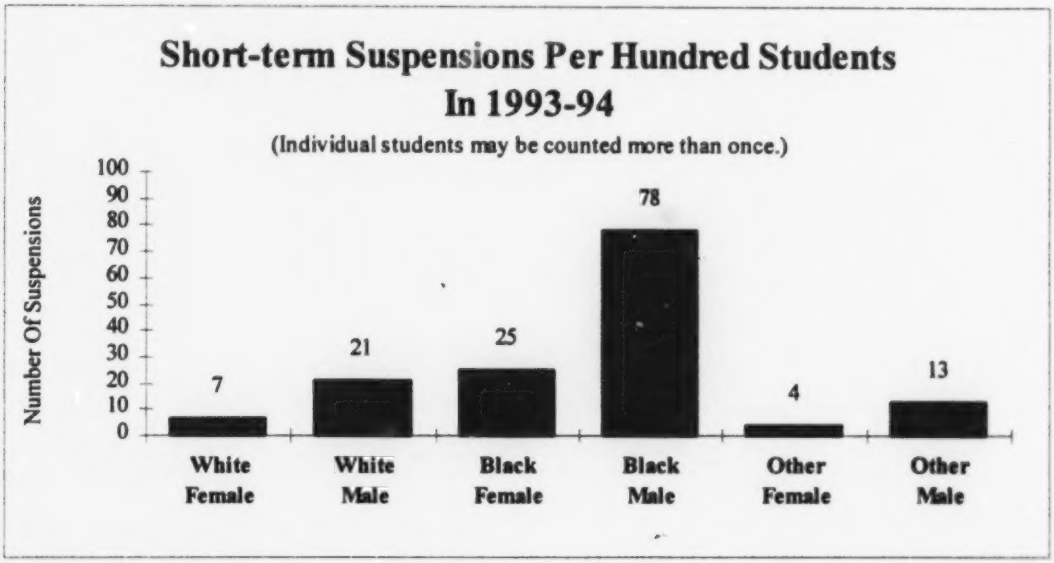
All six race and gender groupings showed declining enrollment from ninth grade to twelfth grade in 1993-94. This decline resulted primarily from the impact of students dropping out of school. The rate of dropping out caused a much steeper decline in enrollment for Black students than it did for White students, even though the total numbers of White students and Black students lost as dropouts were approximately equal.



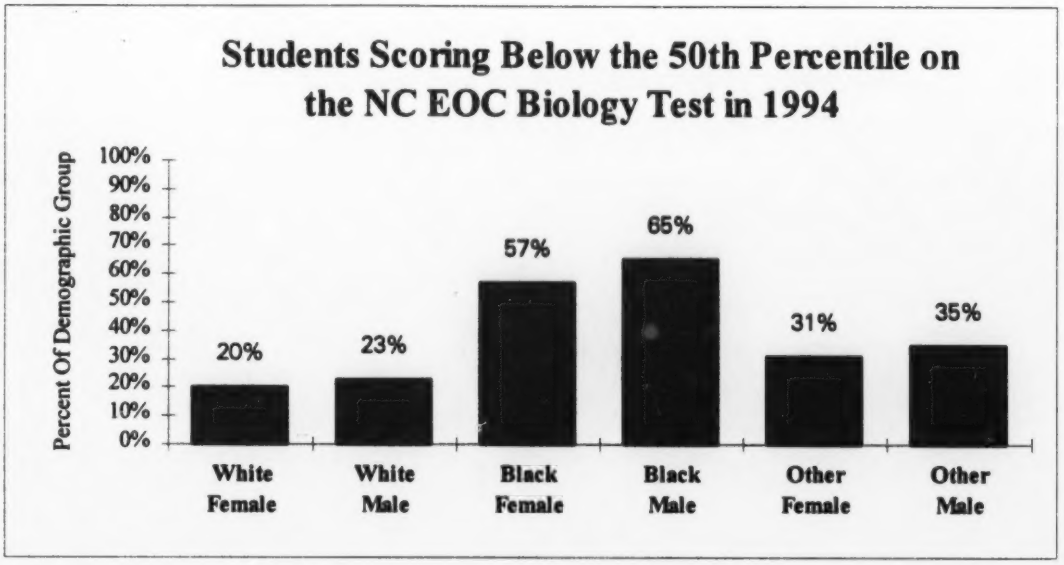


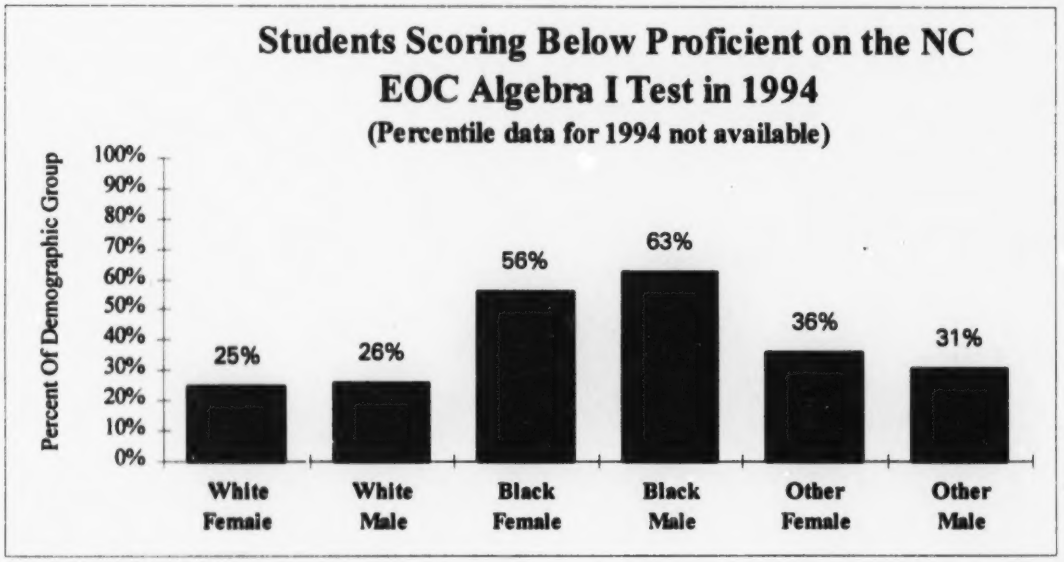
Academic failure and behavior problems are commonly reported reasons for students who drop out. These two graphs show the percentage of high school students who failed at least one of their courses in 1993-94, and the number of disciplinary out-of-school suspensions that were made per hundred students in each demographic group.



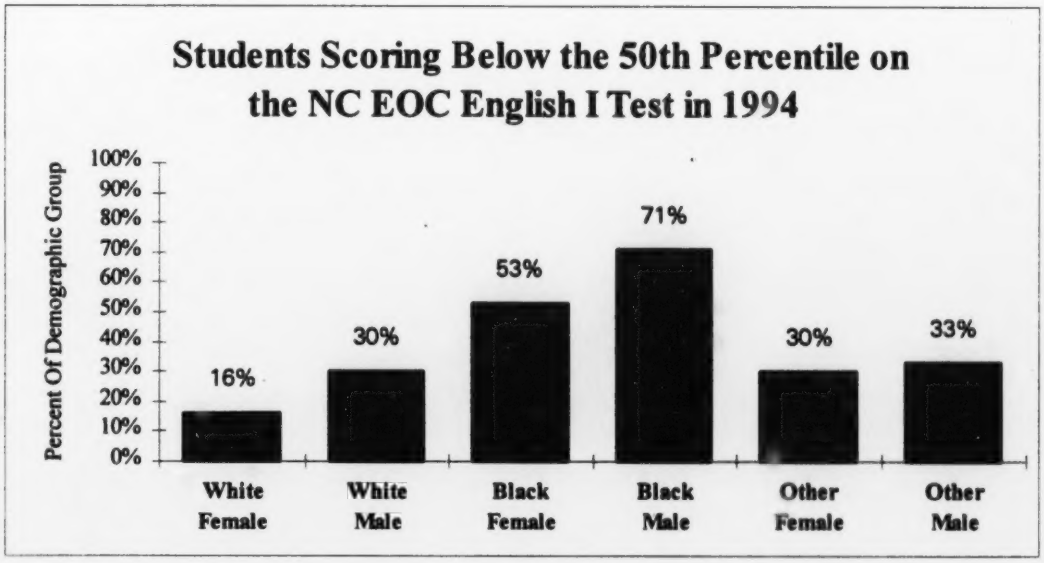


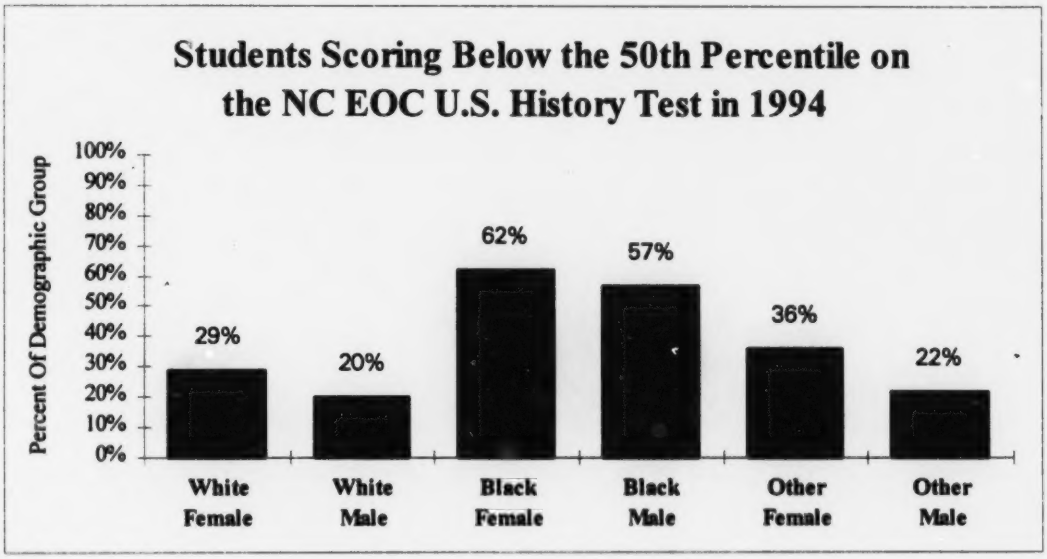
In addition to the rate at which students fail courses, academic failure in high school can be measured by examining the percentage of students who obtain low scores on the state End-of-Course tests. The following four graphs look at low achievement rates for four courses required for high school graduation.





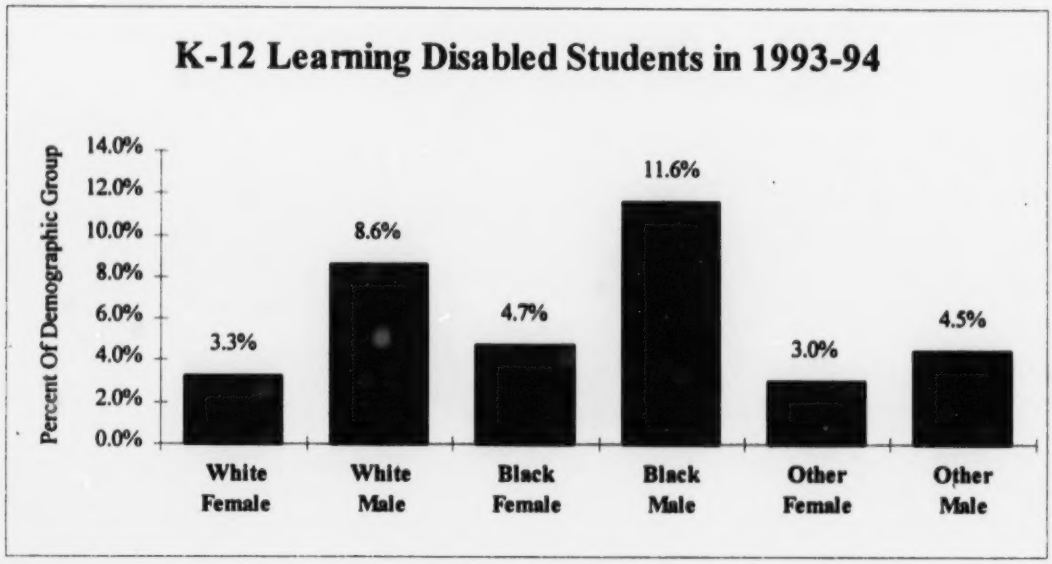
Gender appears to be less of a factor in distinguishing low achievement in mathematics and science than it is in English and history. The profile of low achievers in U.S. History in noteworthy because it is the one measure on which a higher percentage of females than males obtained low scores.

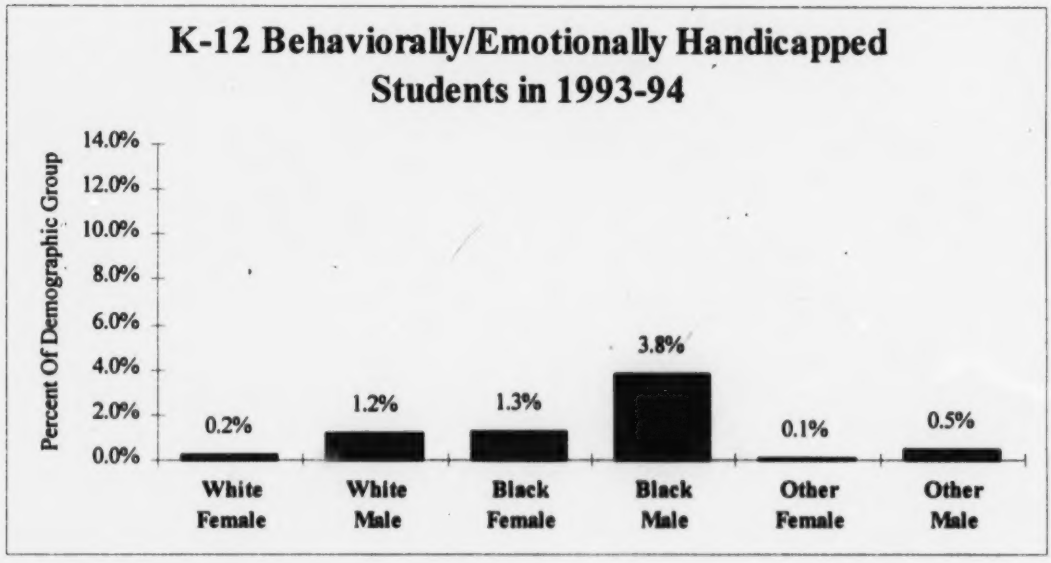




SPECIAL PROGRAMS

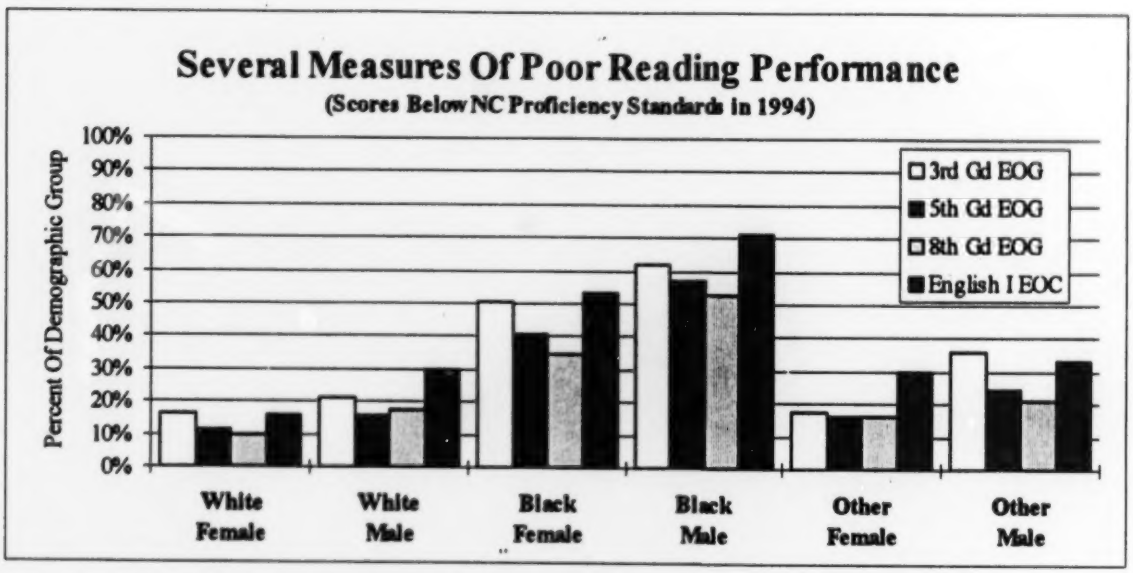
Race and gender seem to have a significant impact upon placement in special programs. As shown below, far more males than females are identified as Learning Disabled, and far more Black males than any other group are identified as Behaviorally/Emotionally Handicapped. The percentages shown are for all students grades K-12.

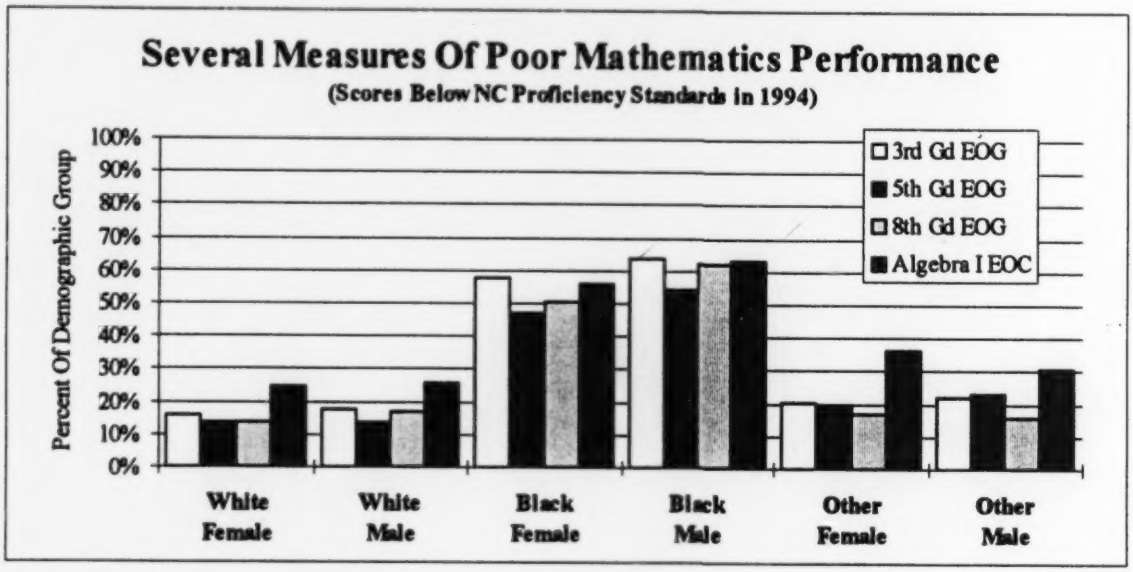




SEVERAL MEASURES OF POOR ACADEMIC PERFORMANCE

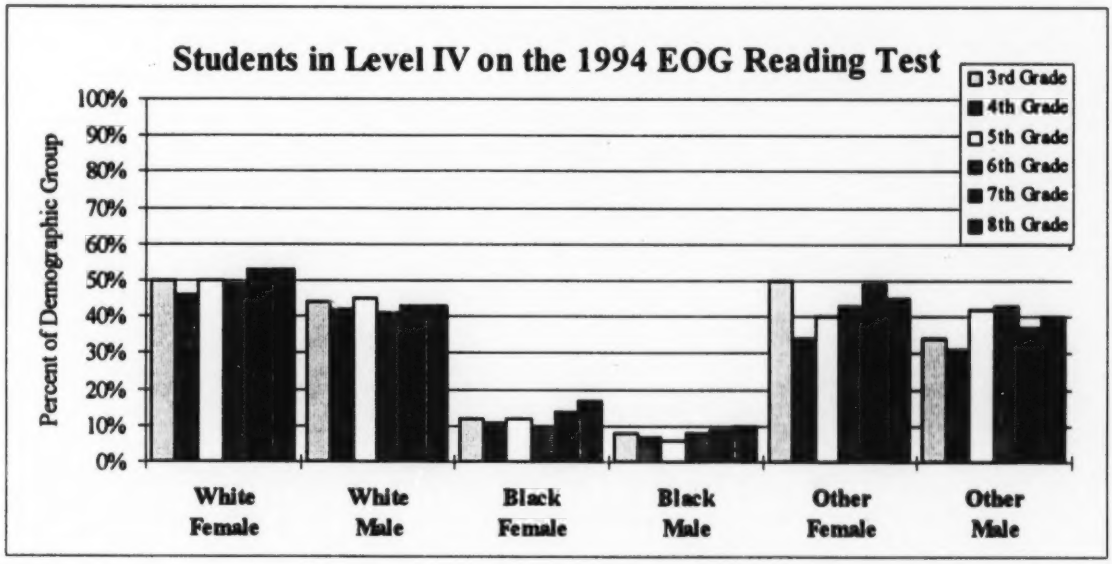
As shown below, the demographic profiles of low achievement were remarkably consistent across grade levels.

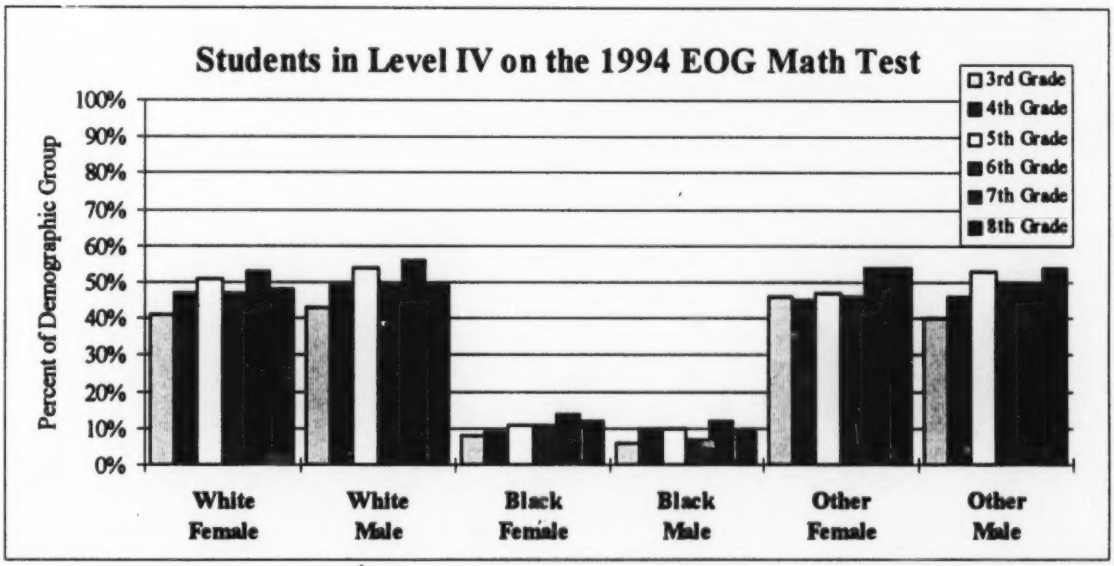




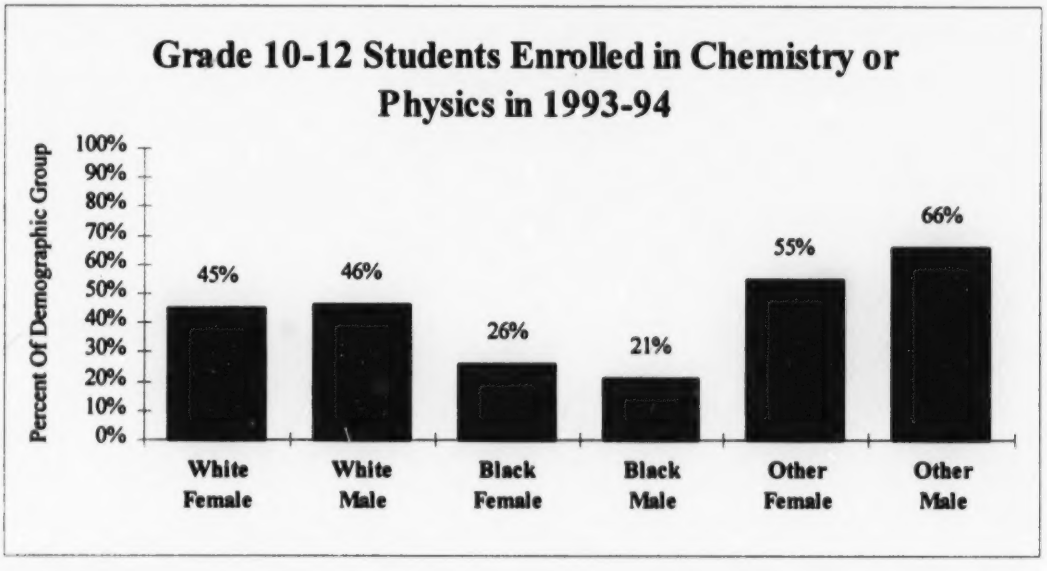
SEVERAL MEASURES OF ACADEMIC SUCCESS

The final four graphs show indicators of academic success. As might be expected, the shape of the demographic curve on these graphs is approximately the inverse of the curve shown on the graphs of academic failure. Scores in Level IV on the End-of-Grade tests identify students who "consistently perform in a superior manner clearly beyond that required to be proficient." White females generated the highest percentages in this level at all six grades, and Black males generated the lowest percentages.

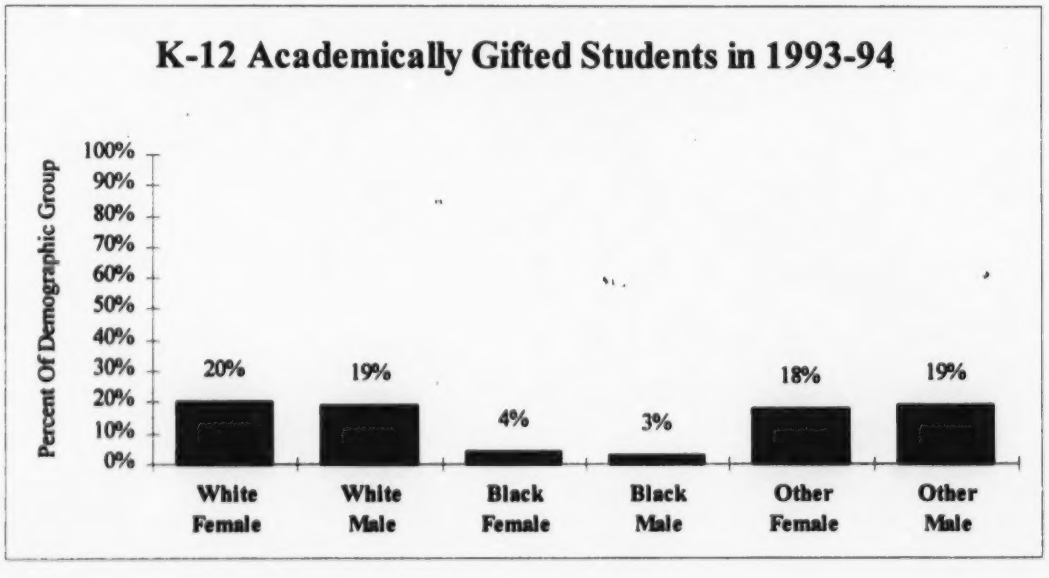




Chemistry and Physics are considered advanced elective science courses, and both proficiency and participation rates in these courses are reported on the state's "report card" for school systems. Both courses are required for recognition through the NC Academic Scholars Program. As shown, a smaller percentage of Black students enrolled in these courses.



Placement in the academically gifted program is based upon state guidelines that require aptitude and ability testing and assessment classroom performance. A much smaller percentage of Black students have qualified and been placed in this program than other groups.



CHANGES FROM 1992-93 TO 1993-94

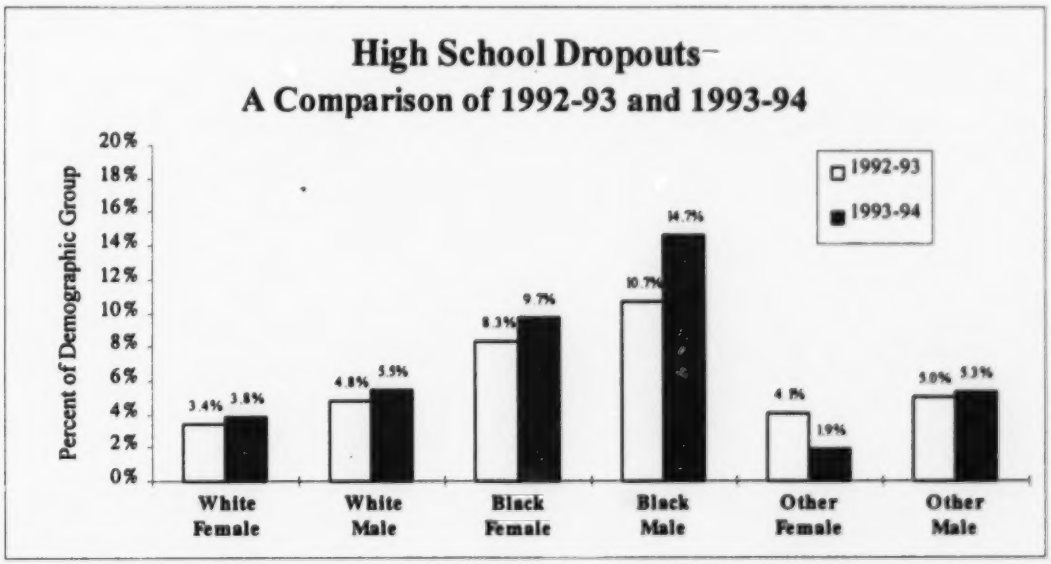
Findings shown in this report using 1993-94 data are very similar to the findings shown in the previous report that used 1992-93 data. The consistency of the pattern of achievement for demographic groups and the size of the gaps between groups remained very stable over the two years. The final three graphs in this report show several changes that are noticeable when comparing 1993-94 to 1992-93. In each case, the changes widened the gap between the demographic groups.

- Dropout rates for Black male high school students rose from 10.7% to 14.7% while White female dropout rates stayed below 4%.

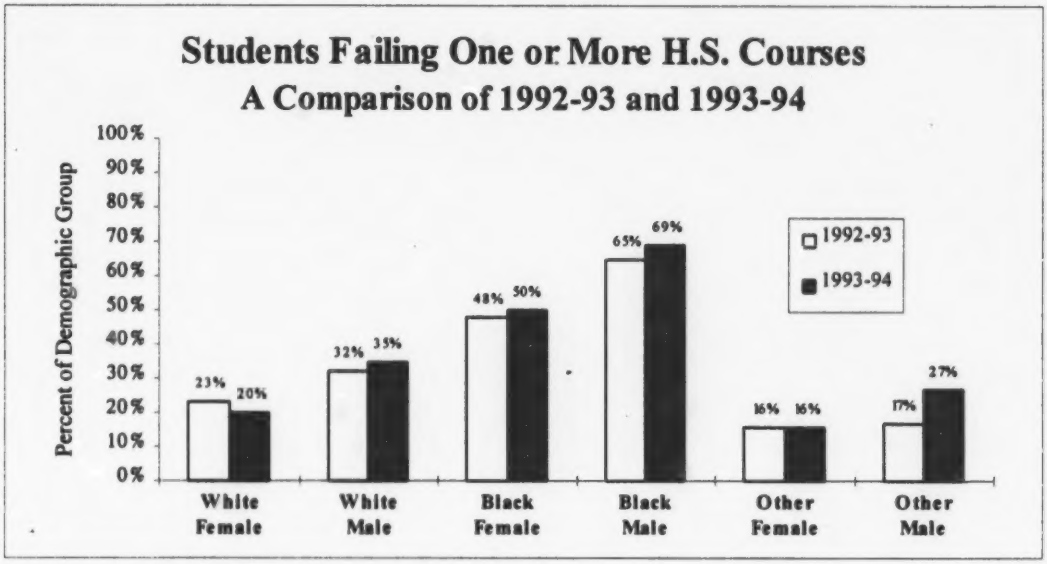
- The percentage of Black male high school students who failed at least one course rose from 65% to 69% while the percentage for White females fell from 23% to 20%.

- The percentage of fourth-grade Black males who scored below 2.5 on the NC Writing Test fell from 91% to 83%, but all other demographic groups showed greater improvement. The percentage of White females scoring below 2.5 fell from 69% to 45%.

The following graph shows that dropout rates rose in 1993-94 for each demographic group except for Other females. The increase was largest for Black males, rising four percentage points.



The percentage of students failing one or more courses in high school rose in 1993-94 for each demographic group except White and Other females. The biggest rise was for minority males, both Black and Other.



In contrast to the rise in high school failing grades, a lower percentage of every demographic group scored below the state proficiency level (2.5) on the 4th Grade Writing Test in 1993-94. However, because improvement was greatest for White females, the gap between demographic groups grew wider.